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UTILITY PATENT APPLICATION TRANSMITTAL
(Only for new nonprovisional applications under 37 C F R § 1 53(b))

Attorney Docket No	RCA 89,385
First Inventor or Application Identifier	Lynch
Title	Ratings Control System with...
Express Mail Label No.	EL278372521US

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. [X] * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)

2. [X] Specification [Total Pages 13]
(preferred arrangement set forth below)
- Descriptive title of the Invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

3. [X] Drawing(s) (35 U.S.C. 113) [Total Sheets 1]

4. Oath or Declaration [Total Pages]
a. [ ] Newly executed (original or copy)
b. [ ] Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 16 completed)
   i. [ ] DELETION OF INVENTOR(S)
   Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

*NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

5. [ ] Microfiche Computer Program (Appendix)

6. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
a. [ ] Computer Readable Copy
b. [ ] Paper Copy (identical to computer copy)
c. [ ] Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. [ ] Assignment Papers (cover sheet & document(s))
8. [ ] 37 C.F.R.§3.73(b) Statement [ ] Power of Attorney (when there is an assignee)
9. [ ] English Translation Document (if applicable)
10. [ ] Information Disclosure Statement (IDS)/PTO-1449 [ ] Copies of IDS Citations
11. [ ] Preliminary Amendment
12. [X] Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
13. [ ] * Small Entity Statement(s) (PTO/SB/09-12) [ ] Statement filed in prior application. [ ] Status still proper and desired
14. [ ] Certified Copy of Priority Document(s) (if foreign priority is claimed)
15. [ ] Other: ....
....
....

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:
[ ] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No: _____/_____
Prior application information: Examiner _____ Group / Art Unit: _____
For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS

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RATINGS CONTROL SYSTEM WITH TEMPORARY OVERRIDE CAPABILITY

BACKGROUND

This invention relates to systems for blocking viewing or recording of
television programs which exceed a ratings, spending limit, or other viewing
limitation set by a supervisor.

Video signal processing systems such as television tuners contained in
television sets, video cassette recorders, or cable boxes which are suitable for
coupling to a display device such as a picture tube and which contain circuitry and
software designed to prevent viewing of programs containing ratings information
below a level set by a supervisor, commonly known as "V-chip," or exceeding
spending limits in pay-per-view systems, are known. The so-called V-chip is a
programmed processor which allows the supervisor with a password, usually a parent,
to set a ratings level, so that supervised viewers such as young children cannot view
"higher" rated broadcasts.

A device or system that provides ratings control permits a user to prevent
certain programs and/or scenes from being viewed and heard based on certain criteria,
e.g., the content of the program/scenes or the subscription cost. For example, a parent
might specify that programs and/or scenes including violent subject matter should be
excluded. Alternatively, a supervisor can specify a rating limit, such as PG-13, and
programs and scenes exceeding that limit (e.g., R and X rated programs) could not be
viewed or heard. The adult with the password can also limit the use of pay-per-view
or can limit the pay-per-view spending limit. By decoding program content
information included in an auxiliary information component of a television signal,
e.g., Extended Data Services (XDS) data included in an NTSC television signal in the
United States or PSIP data included in an ATSC television signal, a television
receiver containing a data "stripper" (i.e., data decoder) can "slice" (i.e., extract)
information from the television signal (e.g., from the vertical blanking interval (VBI)
of an NTSC signal or from PSIP data in an ATSC signal), decode the data to
determine the content and rating of television programs and scenes, and compare the

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content and rating to the limits set by a user. When V-Chip ratings control is activated by the a viewer who has the proper authorization (hereinafter referred to as "supervisor" or "parent"), and a ratings limit is set, the processor within the receiver utilizes a "stripper" which functions to slice, or extract, ratings information contained

5   in the television signal for most broadcast programs and channels. When the ratings information exceeds the value elected by the authorized supervisor, the processor is designed to blank the screen and mute the audio portion of the broadcast. For television receivers which also have multi-image display capability, i.e., produce a display containing main and auxiliary images (e.g., systems that provide picture-in-

10 picture (PIP) or picture-outside-picture (POP) features), the receiver must provide ratings control for both main and auxiliary programs if both main and auxiliary pictures are displayed and the supervisor has activated ratings control. For those programs and scenes that exceed the specified limits, the system causes the video display to be modified, e.g., blanked, and the audio is muted. In addition, the system

15 may display a message indicating the reason for the interrupted reception and the expected duration of the interruption (e.g., SCENE EXCEEDS CONTENT LIMIT). The supervisor may also deactivate the V-chip ratings control by choosing to permit any level of broadcast to be displayed; in such case no blocking of program content by rating takes place.

20   The supervisor may also have the option to set other limits such as spending for "pay per view" events and/or accumulated time that a viewer has access to the system. The viewer or class of viewers can be identified by a profile which can be given a name such as "children," "parents," and the like. Each profile is a collection of permission levels.

25   Some existing systems use multiple profiles, for example a profile for a younger child, a second profile for an older child, and a third profile for the parents. Each profile may have a different ratings limit and pay-per-view spending limit

      The ratings in the current "V-chip" system uses a ratings system as follows, from the most permissive to the most restrictive:

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TV-Y	All children
TV-Y7	Directed to children age 7 and above
TV-7-FV	Contains fantasy violence or comedic violence, but otherwise directed to age 7 and above
TV-G	Appropriate for all ages, containing little or no violence, sex, or adult language
TV-PG	Unsuitable for younger children
TV-PG-V	Contains higher level of violence than average TV-PG
TV-PG-S	Contains higher level of sexual situations than average TV-PG
TV-PG-L	Contains higher level of coarse language some suggestive dialogue than average TV-PG
TV-14	M
TV-MA	Mature audience only, unsuitable for children under 17 years of age

The V-chip can also be set to block Motion Picture of America (MPAA) rated movies above a supervisor-set level for movies on cable TV which have not been edited for television and retain their original rating, according to the following ratings system:

5

G	General audiences
PG	Parental guidance suggested, may not be suitable for all children
PG-13	Parents strongly cautioned. Some material may be inappropriate for children under 13
R	Restricted, under 17 requires a parent or guardian
NC-17	No one under 17 admitted

With currently available technology, in situations where the supervisor wishes to permit viewing of a particular television broadcast when the supervised person or group is not present, for example if the children are asleep and the parents wish to watch an NC-17-rated movie broadcast on cable TV, the supervisor must reset the

5   ratings limit, set the profile to the parent profile (in a multiple profile system) or completely unlock the system using the password, and then the more restrictive level must be reset so that the children's restriction limit is restored.

Due to the inconvenience of having to reset the ratings limit or completely unlocking the system after completion of the special broadcast, many supervisors do

10   not remember or do not bother to reset the ratings or restore the active profile to the normal profile, and thereby fail to effectively use the ratings control system to its full advantage. The present invention addresses that problem.

SUMMARY OF THE INVENTION

The present invention comprises a video signal processing system such as a

15   television receiver, cable box, or VCR tuner for producing an output signal suitable for coupling to a display device to produce a displayed image, the video processing system having a supervisor control system, such as a specially modified V-chip, which blocks viewing of programs which are received with embedded ratings information or spending information, authorized view time, or other condition which

20   is outside a range selected by a supervisor, such as a parent, and comprises an

improvement which permits the supervisor to enter one or more temporarily revised limits or permit specific programs to be viewed. At the end of the temporary period or completion of the specific programs permitted by the supervisor, the system of the invention automatically restores the normal ratings and/or spending limit for the

5   selected profile(s). Children and others who do not have the supervisory password can not change the ratings control range or temporarily override blocking. Preferably the system comprises means for the supervisor who has entered the password accepted by the control system to enter (A) one or more specific broadcast programs to be unblocked, (B) one or more channels to be unblocked for one or more specific

10 time periods, (C) a revised ratings profile for a specific time period, or (D) a revised spending limit. Another preferred feature is for the processor to be programmed to display a status listing of programs or channels unblocked and the corresponding time periods, or to display the status of the remaining spending authorization for a profile.

The invention also comprises a method for blocking viewing or recording of

15 television programs which are broadcast with ratings information or spending information which is outside a range selected by a supervisor comprising (A) receiving one or more profiles comprising ratings and/or limits for each profile from a supervisor, (B) receiving override information from a supervisor corresponding to one or more modified profiles which specify one or more permitted television programs,

20 one or more permitted channels to be unblocked for one or more specific time periods, or a revised ratings range for one or more specific time periods, (C) blocking viewing or recording of television programs outside the current normal ratings limit profile but permitting viewing of unblocked channels, unblocked television programs, or programs within the temporarily revised ratings limit.

25 In another aspect, the invention comprises a ratings control system comprising means to block programs which are broadcast with ratings information or spending information which is outside a profile having a range selected by a supervisor, means for a supervisor to enter a password and select a program, channel, or time period to which the normal ratings control range or spending limit for the profile is temporarily

30 revised, and means to automatically restore the normal ratings control range at the expiration of the selected time period(s) or completion of the selected program(s).

:Another aspect is a processor which normally blocks viewing of programs or recordings outside a viewer profile entered by a supervisor, which permits or denies viewing of programs according to temporary override(s) instructions entered by the supervisor, and which returns to normal blocking profile after expiration of a time

5   period set by the supervisor, or by removal of the override(s) by the supervisor, or after completion of the programs or recordings permitted in the temporary override(s) instructions.

BRIEF DESCRIPTION OF THE DRAWINGS

10   FIG. 1 shows, in block diagram form, a preferred system of the invention.

DETAILED DESCRIPTION OF THE INVENTION

The invention will be illustrated with respect to a preferred embodiment of the invention, but the invention should not be construed as limited thereto. For example, a television receiver will be illustrated, but the invention is also applicable to other

15   types of video processing systems such as those with display devices such as television sets, and those without display devices but suitable for coupling to display devices, e.g., set-top boxes (e.g., direct broadcast satellite (DBS) signal receivers and video recorders such as VCRs). In general, the invention is applicable to any system, device or apparatus that employs ratings control or spending limits or other criteria to

20   permit or deny access to video or audio broadcasts or recordings.

As shown in the block diagram in FIG. 1 wherein a child's profile is active in the system, the standard viewable test 11 is run by the processor to determine initially if the program is viewable 12. The processor receives both current event information

25   13 and the current user's rating profile 14 which has previously been entered by the supervisor who has the password. The current event information can be received from the stripper, system clock, or other sources, and comprises the program ratings information, time length, pay per view cost, and the like. The current user's rating profile contains all of the ratings, spending, accumulated view time, and similar

30   information associated with the currently authorized viewer.

To illustrate the invention, we first assume a case wherein the supervisor of the system who has the password wants to allow a certain program to be viewed by the child but the program's rating is above the allowed limit. The supervisor selects "override" from a list of displayed options called up when Program mode is selected

5   using a remote controller. The supervisor is then challenged to enter the correct password to enter an override in the override list 17. In one example, the supervisor identifies a certain program by the channel, the start and stop time, and the Child profile in cases where the system allows alternative profiles.

The system displays a screen which calls for:

10

Program Identifier (for instance channel);
Start and Stop Time; and
Profile

15   After the supervisor accepts the changes and exits the program mode, the override is recorded in the system's memory in the override list 17. Later, when the television is tuned to a channel at the time the program is being broadcast and the system is set to the child's profile, the Standard viewable test 11, based upon the program's rating in the current event information 13 and the child's profile 14 rating

20   limit, is executed to initially determine if a program is viewable 12; in this example it is NOT viewable 15. At this point according to the invention, the override is determined by the processor to be active 18 when the override test logic 20 is entered, and since the program matches the Program Identifier in the Override List 17 and the system is within the Start and Stop Time for the program event and the current profile

25   is the child profile, the Standard Decision to NOT 15 view this program is overridden and the program is now viewable 19. After the override expires it is removed from the list by the processor logic.

In a second example, the supervisor wants to temporarily disallow all

30   programs to be viewed by any profile at a given time in the evening. The supervisor enters the program mode with the remote controller, selects ratings control, enters a correct password, and then the override list 17. The system challenges the supervisor to enter the correct password to enter an override in the override list. The supervisor identifies all programs beginning at a certain time, say 11:00 PM, and selects all

35   profiles.

The screen display would appear as follows:

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Override List Contents:
All Program Identifiers (for instance channel)
Start Time (11:00pm on a certain date) with No Stop Time
5   All Profiles

Later, at 11:00 PM, when the television is on and set to any profile, even the
Parent profile, the Standard determination 11 based upon the program's rating
received from the current event information 13 and the current user's profile rating
10   limit 14 occurs to determine if a program is viewable; in this illustration it is 16. The
override test 20 is entered and override logic 21 is applied by the system to test
whether to override the Yes returned by the Standard viewable test 11. Assuming the
program matches the All Program Identifier in the Override List Contents 17 and the
time and date for the profile includes the Start Time for the program event and since
15   the current profile 14 matches the All Profile Identifier in the override list 17, then
the program's Standard determination of viewable 16 is passed through the override
active test 21. Since the outcome of test 21 is affirmative 23 the program is now
blocked 24.

20   In another illustration the supervisor of the system wants to allow programs to
be viewed by the current profile at a given time in the evening, for example by the
babysitter after bedtime for the children. The supervisor enters the override list 17.
The supervisor identifies all programs beginning at a certain time, say 11:00 PM, and
selects all profiles, and removes all limits until the stop time. The screen display is as
25   follows:

Override List Contents:
All Program Identifiers
Start Time (11:00pm on a certain date) and Stop Time
30   All Profiles

The Standard determination 11 based upon the profile rating limit 14 and
current event information 13 occurs to determine if a program is viewable and in this
illustration it is NOT 15. The override logic 18 is then entered and since the program
35   matches the All Program Identifier in the Override List Contents 17 and since the
program is within the override window of time and date, the Standard determination
of NOT viewable 15 is overridden 19 and the program is now viewable (unblocked)
23. The positive response from the override active test reverses the outcome of the

standard viewable test. If the override was not active 25 in this case, the initial no 15 would remain in force and the program would be blocked 24.

In another illustration, the supervisor of the system wants to allow programs to be purchased by the child's profile at a given time in the evening for only one evening. A limit for the child's profile of purchasable limit of $0.00 can be overridden for the one evening and placed at $10.00. The supervisor, after successfully entering a password, enters an override in the override list 17 by identifying All programs beginning at a 6:00 PM to 11:00 PM on the selected date or day, and selects the child's profile. The screen display would appear as follows:

Override List Contents:
All Program Identifiers
Start Time 6:00 PM on a certain date and Stop Time of 11:00 PM on same date
Child profile

The Standard determination 11 based upon the profile spending limit within normal profile 14 occurs to determine if a program is viewable and in this case it is NOT 15. The override logic 18 within the processor is entered. Assuming the program matches the All Program Identifier in the Override List Contents 17 and the program is within the override window of time and date and the purchase cost is less than the override cost of $10.00 then the purchase is allowed 19 and the program is unblocked 23. The Standard determination of NOT viewable 15 is overridden 19 and the program is now viewable 23.

The temporary override feature of the invention is also applicable to apparatus, systems, methods, and processors which have a view time limit feature wherein the supervisor can set a maximum total daily view time for a profile, for example the parent can set a maximum of one hour of view time per weekday and two hours per weekend day for a child's profile. If the parent wishes to reward a child for doing his or her homework, the parent may wish to allow extended view time for one day but not wish to change the normal view time limits in the profile. This invention would permit a change to the maximum view time for a single day, or combination of days, but then automatically restore the normal view time limitation after the selected day or days are over.

While this invention has been illustrated and explained in sufficient detail so that those skilled in this art can readily make and use it, various alternatives,

modifications, and improvements which are within the scope and spirit of the invention should become apparent.

CLAIMS

1. A video signal processing system for producing an output signal suitable for
coupling to a display device to produce a displayed image, the video processing
system having a ratings control system which blocks viewing of programs which are
5   broadcast with ratings or spending information which is outside a normal profile set
by a supervisor, which permits the supervisor to temporarily modify the ratings
profile, and which automatically restores the normal profile at the end of the period..

2. System according to claim 1 wherein the ratings control system permits the
supervisor to (A) unblock one or more specific broadcast programs; (B) block or
10   unblock one or more channels for one or more specific time periods; (C) specify a
revised ratings profile for a specific period, or (D) specify a revised spending limit for
a period.

3. System according to claim 1 further including means to display a status listing
of programs or channels unblocked and the corresponding time periods.

15   4. System according to claim 1 wherein the video signal processing system for
producing an output signal comprises a television receiver, cable box, or a video
cassette recorder tuner.

5. System according to claim 1 which permits limiting the view time in the
normal profile, and allows the supervisor to temporarily override the view time limit.

20   6. Method for blocking viewing or recording of television programs which are
broadcast with ratings information or spending information which is outside a range
selected by a supervisor comprising (A) receiving one or more profiles
comprising ratings limits, and/or spending, and/or view time limits for each profile
from a supervisor, (B) receiving override instructions from a supervisor
25   corresponding to one or more modified profiles which specify one or more permitted
television programs, one or more permitted channels to be unblocked for one or more
specific time periods, modified view time limits, or a revised ratings range for one or
more specific time periods, (C) blocking or permitting viewing or recording of
television programs according to the current normal profile but as modified by the
30   temporary override instructions.

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7. Ratings control apparatus comprising means to block or permit programs which are broadcast with ratings information or spending information according to a profile, means for a supervisor to enter a password and select a program, channel, or time period for which the normal ratings or spending information is temporarily

5   revised, and means to automatically restore the normal ratings control range at the expiration of the selected time period(s) or completion of the selected program(s).

8. Apparatus according to claim 7 further including means for the supervisor to enter a normal view time limit in a profile, and means for the supervisor to temporarily override the view time limit in the profile.

10   9. Apparatus comprising a processor which normally blocks viewing of television programs or recordings outside a normal viewer profile entered by a supervisor, which permits or denies viewing of programs according to temporary override(s) instructions entered by the supervisor, and which returns to the normal viewer profile after expiration of a time period set by the supervisor, or by removal of

15   the override(s) by the supervisor, or after completion of the programs or recordings permitted in the temporary override(s) instructions.

ABSTRACT

A system and related apparatus for comprising a video processing system having a ratings control system which blocks or permits viewing of programs which are broadcast with ratings or spending information according to a profile set by a supervisor who has entered a password accepted by the control system, in which supervisor can temporarily modify the profile. After completion of the time period(s) or supervisor-designated television broadcast(s) or programs, the system automatically returns to the normal profile.
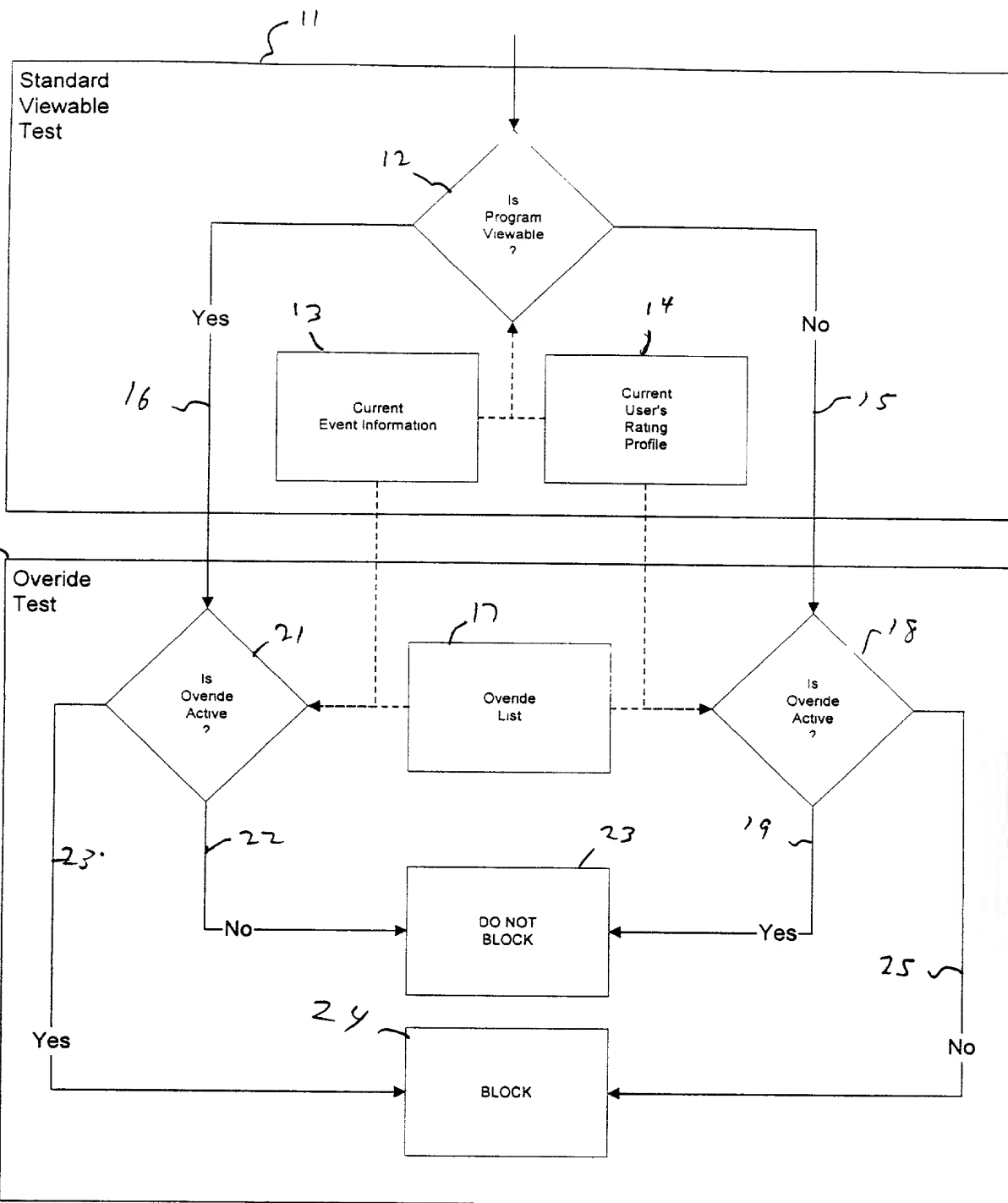
Figure 1